# M SERIES SUBWOOFER
# OPERATING INSTRUCTIONS

Thank you for purchasing this Epos M series subwoofer.

The following items are supplied with your subwoofer - should any item be missing please contact your dealer:

Plinth with 6mm carpet spikes (4) and metal discs (4)
Fixing bolts - long - Type A - (4)
Fixing bolts - short - Type B - (4)
Felt pads (4)
Feet (4)
Power cables (see text in warning section)

**WARNING**

For safety reasons please read the following instructions carefully before attempting to connect your Epos M subwoofer to the mains.

The M subwoofer is not designed for permanent external use. Being a powered product it would be damaged by rain water or other contaminants entering into the amplifier via the vent holes and the wooden cabinet would be damaged if soaked with water.

As with all electrical products, make sure the correct mains voltage is selected by the two way selector switch on the rear panel marked AC Voltage Selector. If you are in any doubt, contact your supplier for advice. As a general rule, the amplifier cannot be damaged by supplying lower voltages than marked on the switch panel, but excessive voltage will cause the mains fuse to blow or possibly even damage the internal circuitry (if in doubt, ask your dealer/supplier).

Two power cords are supplied as standard with the M subwoofer. These have the international IEC connector for plugging into the amplifier panel at one end and either of two styles of plug at the other end.

**USA, Canada and Japan**
The USA style plug with two flat blades should be used with the voltage selector switched to 115V operation and a mains fuse rated at 4 Amp inserted in the pull-out drawer.

**Europe**
The two round pin Euro plug should be used with the AC Voltage selector switched to 230V.

**Rest of World**
Your distributor/dealer will ensure you have the correct cable. Please check if in doubt.

## IMPORTANT SAFETY PRECAUTIONS

**CAUTION**
To reduce the risk of electric shock, do not remove the rear panel. There are no user serviceable parts inside. Please refer all servicing to a qualified engineer.

The lightning flash with the arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of un-insulated 'dangerous voltage' within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important safety information featured within this instruction manual.

**VENTILATION**
Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product. To protect it from overheating, these openings must not be blocked or covered.

The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface.

This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the manufacturer's instructions have been adhered to.

**SAFETY PRECAUTIONS**
**Read Instructions -** All the safety and operating instructions should be read before the product is operated.

**Retain Instructions -** The safety and operating instructions should be retained for future reference.

**Heed Warnings -** All warnings on the product and the operating instructions should be adhered to.

**Follow instructions -** All operating and use instructions should be followed.

**Cleaning -** Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

**UNPACKING**
The M subwoofer is heavy. (26Kgs/57lbs) For the sake of your health, do not try to lift or carry it around alone. Two people are required to lift it so please be careful. Get help from a family member or friend if this product is not installed by a professional person.

The best way to remove the speaker from the carton is to open the top of the carton, roll it over with the flaps folded out and pull the carton off, leaving the speaker in its protective polyethylene foam. Pull one foam frame off one at a time and lower the speaker to the floor carefully. Remove the poly bag and keep it out of the hands of children and babies as it can cause suffocation.

## GETTING STARTED

### OVERVIEW

The Epos M Subwoofer is an active loudspeaker. In other words, it has an built-in power amplifier to boost the signal level. Therefore, there is no need for an external power amplifier to drive it. In addition, the M Subwoofer has a complex filter circuit which boosts sub-sonic frequencies and is adjustable to allow it to be matched to different room sizes, shapes and user requirements. The rear panel controls provide a range of adjustments for this purpose.

The M Subwoofer is designed to extend the low frequency response of both 2 channel and multi-channel systems, which each demand a very different tonal balance. This is described later, but control adjustment and placement in the listening room is important, so please read these instructions carefully for best results.

### QUALITY

The M Subwoofer has a powerful 10" (254mm) loudspeaker driver, with enough magnet strength and voice coil size to handle very high power levels for long periods without distress. Its cone diaphragm is very stiff to keep distortion and colouration to a minimum. The rubber suspension surround is smaller than normal and quite stiff, which also helps to reduce distortion and low frequency over-hang. In short it has been designed to be more appropriate for a two channel bass unit than a conventional subwoofer.

To further boost the fidelity of the M subwoofer, it has a very stiff cabinet with extensive internal bracing, which is rarely found in conventional subwoofers. It has a completely separate section at the back of the cabinet to house the amplifier, which would normally be found in professional speakers and not in conventional subwoofers at any price. To further improve the sound quality Epos does not use port tuning to achieve boost bass extension, which avoids 'chuffing' air turbulence noises interfering with the fidelity of the speaker.

In short, the M subwoofer is very unusual and can be used to good effect to extend the frequency response of a stereo system of any quality or price.

## INSTALLATION AND SETUP

Having established which power cord to use, select the correct mains voltage for your region with the selector switch on the back panel. (If in doubt, please read Page 1 again or ask your supplying dealer for advice). If neither of the two cords supplied are correct for your mains supply socket, do not proceed until you have contacted your dealer for advice or assistance.

Positioning the subwoofer is important if the best results are to be achieved. Place the subwoofer where it can be connected easily to the mains power supply and to the output of the receiver or stereo amplifier used for the rest of your system. Whilst this would normally be close to the system, be prepared to move it around the room to gain the best results.

The Epos M Subwoofer is a ‘down-firing’ speaker that has four purpose made legs that hold it 50mm above the floor. It also has a plinth that fixes to the ends of the feet with long bolts and covers the entire bottom of the speaker. Make sure the plinth is bolted to the cabinet with the Epos badge at the front. The plinth helps to prevent accidental damage to the exposed driver and also provides a stable platform for the speaker to stand on.

The mains supply can be left connected as it has a low current standby condition which is enabled when no signal is present for a short while.

You have the choice to use the plinth with, or without, the 6mm carpet spikes that are supplied together with it. The spikes can be adjusted to level the speaker and dig deep into carpet to provide mechanical de-coupling of the device into the floor. Metal discs are also supplied to prevent damage to wooden flooring, if required. To fix the plinth to the legs, use the four long bolts.

You may not wish to use the plinth, but mount the speakers flat to the floor, using only the four legs. This can be done by using the four shorter fixing bolts supplied to hold the legs to the bottom of the cabinet. If required, there are four self adhesive pads supplied which can glue onto the ends of the legs or the bottom corners of the plinth to prevent vibration or rattling, if the surface isn't completely flat.

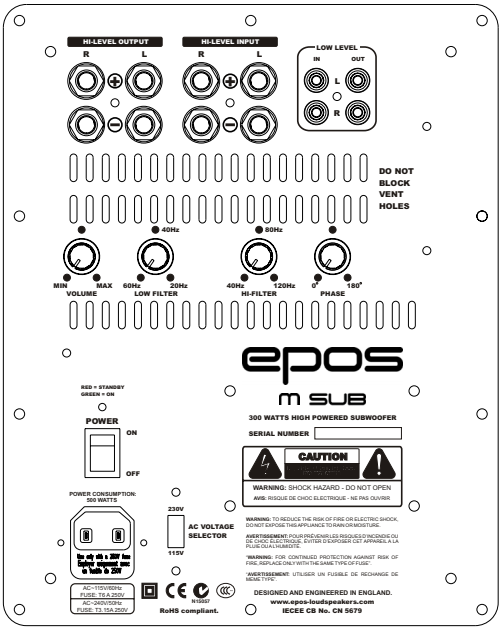
In the case of a multi-channel system (5.1), connect a shielded cable from the sub-sonic (LFE) output of your receiver to the RCA sockets on the back of the M subwoofer marked low level. You will note that there are two low level input sockets marked L & R, which allow for a stereo signal from your receiver or amplifier.

The specially designed summing circuitry in the M subwoofer combines the L&R low level input signals internally without forcing the source signal into mono.

Set all the controls to the middle position and switch on the M subwoofer using the switch marked POWER. A small LED indicator above the switch will light if everything is OK. Red indicates standby position and green is the indication for normal operation.

## SUBWOOFER CONTROLS

You are now ready to set-up the system using the user guide or instructions from your receiver or DVD player. The sound balance can be adjusted with the controls on the rear panel of the M subwoofer.



**Low Level Input**
(See connection comments at the beginning of page 4) If your amplification system has a dedicated subwoofer output it should be connected to either the left or right low level input. If you have a mono connection from your amplifier you may use either connection.

**Low Level Output**
The low level output is filtered by the M subwoofer circuitry to provide a signal back to the L&R front speakers that has had its low frequencies removed. The M subwoofer will provide these low frequency signals exclusively, to prevent a conflict.

**High Level Input**
If your receiver system does not have a dedicated subwoofer line output, your subwoofer must be connected via the high level input terminals on the rear panel. Connection should be made from the speaker terminals on your amplification system to the High Level Input Connections.
Note: Only connect using line level inputs **OR** high level inputs.
***DO NOT USE BOTH METHODS OF CONNECTION AT THE SAME TIME.***

**High Level Output**
The high level output is filtered by the M subwoofer circuitry to provide a signal back to the L&R front speakers that has had its low frequencies removed. The M subwoofer will provide these low frequency signals exclusively, to prevent a conflict. It is possible to run a connection from the high level output to your speakers if you do not have a direct connection from your receiver.

**Volume**
As a starting point, set the output of your receiver or decoder to 0dB level and then adjust the level of the subwoofer to suit the room using the volume control on the rear panel. Thereafter, small adjustments can be made more easily using the volume control on your receiver, via its remote control, rather than adjusting the volume from the back of the M subwoofer.

**Low Filter**
Adjustment is necessary to extend or reduce the low frequencies the subwoofer is able to produce so that it can compensate for the small size of the M subwoofer and your room acoustics. Some movie passages contain massive amounts of low frequency information at intervals, so care should be taken not to set the volume and low filter such that it causes distortion or limiting, due to being played too loud. It is better to use two subwoofers at a lower level setting than over-drive one. Your room size and personal sound preferences will determine how much sound pressure level (SPL) is required to create a realistic performance.

**N.B**. Not everyone will appreciate the effect of sub-sonic movie effects. Even if you think they are great, please remember that low frequencies travel through walls much more easily than high frequencies, so please give a thought to neighbours or other family members who don't share your passion.

**Hi-Filter**
Adjustment is necessary to match the M subwoofer to the remaining speakers in your system. As all speakers have a different low frequency range, depending on their size and how many drivers they use, it will be necessary to adjust the upper roll over point of the M subwoofer to better integrate with the output of the front and centre channel speakers.

**Phase**
Adjustment is necessary to properly integrate the output of the M subwoofer to match the respective phase of the front, centre and rear speakers in your 5.1 system. Phase describes the polarity of the sound waves travelling to your ears. Positive means moving forward and negative means moving back. If the sound from your front speakers is designed to be more positive at their low frequency extreme, it will be necessary to adjust the output of the M subwoofer to also be positive, otherwise they will tend to cancel one another out and reduce the level or distort or colour the sound. As every situation will be different as speakers vary from make to make and room to room, adjustments should be done simply by trial and error. You will easily hear which setting best suits your system after you run it with a signal and adjust the Phase until you hear the most pleasing result.

**Power Switch**
This switch turns the subwoofer 'ON' or 'OFF' (When left in the ON position without a signal it allows the 'STANDBY' feature to become active).

**IEC Socket (Mains)**
Connect to an appropriate mains socket via the IEC Power Cable supplied.

**AC Voltage Selector Switch**
Please ensure the AC Voltage selector is in the correct position. (See Page 1)

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**OVER CURRENT CUTOUT**
The M subwoofer does not use a compression limiter to pre-distort the signals it cannot handle, to prevent it from cutting out. No amplifier has infinite power capabilities and has to be protected from destroying itself under extreme conditions. To protect the M subwoofer's 300W amplifier from excessive current demands, it has been designed to cut the signal to the speaker in the event of an overload. This will temporarily mute the subwoofer and stop it from working until the demand is lower. If the volume is reduced, the frequency range is altered to cut-off at a higher frequency or the passage containing the high level low frequency sound is passed, the sound output will be restored automatically.

**OVER TEMPERATURE CUTOUT**
To protect the amplifier from damage caused by excessive heat, there is a thermal sensor attached to the amplifier's heatsink that is set to trip the output if the internal temperature exceeds a pre-set level. If this happens, the M subwoofer will stop working until the temperature reduces to an acceptable level. The reasons this might happen are high ambient room temperature, direct sunlight, high level operation for long periods and insufficient ventilation of the amplifier control panel.

**POSITIONING AND TUNING**
Remember that low frequencies have a longer wave length and sound waves travel to the ear in waves. It therefore may be necessary to move your subwoofer to different positions to completely suit your requirement or taste. If you require more or less power at low frequencies, it can be affected by the proximity to an adjacent wall or boundary. Each wall or boundary will further enforce the effect of the woofer so, moving it closer or further away from a rear or side wall will change the sound effect dramatically. Corners double the effect as there are two boundaries.

The M subwoofer has been designed to match medium to small rooms, with an area of approximately 10-20 $M^2$ or 300-600 $feet^2$. If higher power or larger rooms are used, it may be necessary to increase the number of M subwoofers used in a single installation.

**SOUND PRESSURE LEVELS**

It is very easy to get used to high sound pressure levels as the human brain compensates for the level by effectively reducing the perceived level the ear is receiving and allows the person to become used to higher and higher levels until the pain threshold is reached. It is therefore necessary to be aware of this and avoid reaching this sublime state before serious or permanent damage is caused to ones ears. Remember that hearing damage, as with all nerve damage, is irreversible.

**TROUBLESHOOTING GUIDE**

**THERE IS NO POWER**

Ensure that the IEC Power cable is connected securely.
Ensure that the plug is fully inserted into the wall socket and is switched on.
Check the fuse in the IEC Power Cable and subwoofer.

**THERE IS NO SOUND**

Ensure that the amplifier is set correctly.
Check if the interconnects are inserted correctly.

**THERE IS A HUM COMING FROM THE SUBWOOFER**

Ensure that all cable connections are secure.

**WARRANTY**

Your Epos subwoofer has been built to very high standard and should give many years of trouble free use. If within 5 years of the purchase date it proves to be defective for any reason other than accident, misuse, neglect, unauthorized modification, or fair wear and tear, we will, at our discretion, replace the faulty parts without charge for labour or return carriage in the UK.

Your purchase invoice/receipt should be retained as it may be required should you need to claim on your warranty. This warranty is valid only in the United Kingdom and is in addition to your statutory rights. Service enquiries in countries outside the UK should be addressed first to the supplying dealer or Epos agent or importer/distributor.

Warranties granted in these countries are entirely at the discretion of the agent or distributor.

**Epos loudspeakers are sold in more than 45 countries worldwide. International distributor details can be found on the website.**

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**M SUBWOOFER SPECIFICATIONS**

This product is not magnetically shielded, so avoid placing it in proximity to a CRT television or computer monitor screen

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|---|---|
| **Amplifier type** | Class D, high efficiency switching circuit |
| **Amplifier power output** | 300 Watts into 4 Ohm load continuous |
| **Frequency response of system** | 20Hz to 150Hz with high and low filter settings at max and min |
| **Speaker impedance** | 4 Ohms |
| **Sensitivity** | 89dB per Watt |
| **Maximum system output SPL** | 112 dB at 1 metre for music program |
| **Amplifier capability** | 300 Watts into 4 Ohms continuous / 500 Watts peak |
| **Bass driver** | 10" (254mm) steel chassis with reinforced paper cone and inverted dust cover. 3" (75mm) high temperature voice coil wound on an aluminium former with high power ceramic magnet system. |
| **Filter compensation circuit** | Multi-element, high and low-pass filters with adjustable phase and active gain control |
| **Cabinet** | Real cherry wood finish, 25mm MDF carcass with internal cross bracing to form a very rigid and sonically dead structure. Double thickness baffle and separate back panel to house the amplifier in its own independent cavity |
| **Finishes** | Light Cherry, Dark Cherry Black (Black painted plinth) |
| **Dimensions H x W x D mm** | 372 x 342 x 450 including plinth |
| **Weight** | 26Kgs/57lbs |


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